Work Order] October-07-13 9:02				*107	7943*				<u> </u>		Page 1
Item ID: D2 Revision ID: Item Name: We	174-1 b			Accept	*N900)040			Setup Star	I VI	S1* S2*
Start Date: 10/ Required Date: 10/ Reference:		Qty: 2.00 I Qty: 2.00	*3*	*14*	Cust Item Customer						
Approvals: Pr	rocess Plan:	115	Date: <u> 3~10-</u> C	9 Tooling:		Date:		R	Run Star	171	R1*
Q	C:		Date:	SPC (Y/N):	I	Date:			Stop	*N	R2*
Sequence ID/ Work Center ID	Opera Descri			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision N	br									
D2174	Rev E										
*100 *100 *100 Waterjet FLOW CNC Waterjet	FLOW	WATER JET Memo 1-Cut as per Deburr if nea	Dwg D2174 Dwg Re cessary	0.00 0.00 v: <u>€</u> Prog Rev: <u>€</u>	2-			14	0		Ae 13:11:18
110	QC2- Ir	nspect parts off m	achine FAI/FAIB	0.00				1			
110 QC Quality Control		Memo		0.00				14			<u>Ae</u> 13:11:18
				DAS 27							
120	QC8- Ir	ispect parts - seco	ond check	0.00 9-89	1,2			111			
120		M		0.00 BINI	18			17			
QC .		Memo		0.00							

Quality Control

												DQA:	Date	e: _	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFOR	MANCE / UP	DATE		-		_	
<u></u>												QA Closed:	Date	e:	
Work Ord	er.					DISPOSITION				AGAINST	DE	PARTMENT/	PROCESS		
1.0	-					Rework	1		Skid-tube	Crosstube			Water Jet		Engineering
Part	No.					Scrap			Machining	Small Fab		Prod	d. Eng. Coor.	٦	Quality
						Use-as-is		Therr	noforming	Finishing		Rec/Stor	e/Packaging		Other
NCR I	No.					Work Order Update			Large Fab	Composite			Supplier		
			1	ı								l c: 0 l			
Root		. .	6.			ption of work order update	1	nitial	·	tion		Sign &			
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Desc	ription		Date	Verification	\dashv	QC Inspector
Doc/Data	Н														
Equip/Tooling	Ш		į											- 1	
Operator	Ш														
Material	Ш													ı	
Setup															
Other							l								
Process							į.								
Supplier			ŀ				ŀ								
Training				*											
Unapproved							<u> </u>								
						F.	AUL	T CATE	GORY						
Land	ing G	Gear				General									
1		Bending				Bend		Grain				Ovalized			Pressure/Forced
		Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	ire		Г	Over/Under	tolerance		Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete		Г	Part Incorred	ct [Weld

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Instructions Incomplete/Unclear

Part Moved

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Wrong Stock Pulled

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

*Work Orde October-07-13		7943		*10	79	43*						Page 2
Revision ID: Item Name:	D2174-1 Web 10/18/13	Start Qty: 2.00	*2*	Accept	*	N900 Cust Item I		100) *	Setup Sta	1.71	S1* S2*
Required Date: Reference:	10/18/13	Req'd Qty: 2.00	*2*			Customer:			,	Run Sta	rt Las	5 4 4
Approvals:		n:		_			ite:		,	Sto	"17	R1* R2*
Sequence ID/ Work Center II 130 *120* Small Fab Small Fab)	Operation Description Small Fab Memo	k	Set Up/ Run Hours 0.00	DAS 27 9-89	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140 OC Quality Control		QC5- Inspect part compl	eteness to step on W/O	0.00	410				-			***************************************

0.00

0.00

14 7/g/3.11.20

150

150
HandFinish
HandFinishing

Chemical Conversion Coat per QSI005 4.1

Memo

				DQA:	Date:
NCR:	Yes /	No	WORK ORDER NON-CONFORMANCE / UPDATE		

										QA Closed:	Date	<u> </u>
Work Orde	or.					DISPOSITION			AGAINST DE	PARTMENT/	PROCESS	3
Part N	 No					Rework Scrap Use-as-is Work Order Update	Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root	į				Descri	ption of work order update	Initial	Act	ion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Chief Eng	Descr	ription	Date	Verification	. QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material		1										
Setup												
Other												
Process												
Supplier												
Training												
Unapproved											·	
						F	AULT CATE	GORY				
Landii	ng Gea	ır				General				1		
	Be	ending				Bend	Grain			Ovalized		Pressure/Forced
	_		t Concer	ntric to	o/s	BOM/Route	Hardwa	ire		Over/Under	tolerance	Temperature/Cure
		acks				Broken/Damaged	—	ion Incomplete		Part Incorred	 	Weld
	$\overline{}$		rimped.			Burrs	—	tions Incomplete/I	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cu	ıffs				Contamination	Mainte	enance		Part Moved		
		eat Treat				Countersink	Mislabe			Positioned V		_
	_		Strip in	Tube		Cut Too Short	Misrea	d		Power Loss/	Surge	Other
	 -	pples in				Drill Holes	Offset					
	_	•	aves in E		n	Drawing	⊢	Calibration				
	-	_	equence			Finish	Out of	Sequence				
	l w	ave/Twi	st in Tub	e	1	Folio	Outside	e Dimensions				

Work Orde		7943		*1079	943*						Page 3
Item ID: Revision ID:	D2174-1	1.0		Accept	*N900	040	100)* s	Setup Star	1.7	S1*
Start Date: Required Date: Reference:	Web 10/18/13 10/18/13	Start Qty: 2.00 Req'd Qty: 2.00	*2* *2*		Cust Item l Customer:	D:				"N	S2*
Approvals:		an:				ate:		F	Run Star Stop	1/7	R1* R2*
Sequence ID/ Work Center II 160 *160* QC	D	Operation Description QC7-Inspect Chemical C	Conversion Coat	Set Up/ Run Hours 0.00 DAS 27 0.00 9-89	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
1.70 * 1/7 \n* Packaging Packaging		ldentify as per dwg & St Mem o	ock Location.	13. 11. 20 A - 0.00 0.00	5			14X			DAS 26 9-89

0.00

0.00

QC21- Final Inspection - Work Order Release

Memo

180

120

Quality Control

13/11/22 D

es /	No				WORK ORDER NON-	CON	NFORM	MANCE / UP	DATE			
								_		QA Closed:	Date:	
er:					DISPOSITION				_	EPARTMENT/		
No					Rework Scrap Use-as-is Work Order Update		! Thern	Machining noforming	Crosstube Small Fab Finishing Composite		-	Engineering Quality Other
				Descri	ption of work order update	ı	nitial	Ac	tion	Sign &		
D	ate	Step	Qty	•	or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
						AUL	CATE	GURY				
Ber Cer Cra Cru Cuf Hea Insp	nding ntre Not cks shed/Cr fs at Treat pection:	imped. Strip in Bend	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Hardwa Inspecti Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete/ enance eled	Unclear	Part Incorred Part Lost/Mi Part Moved Positioned V	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	ng Gear Cer Cra Cru Linsi Rip	Date Date Date Bending Centre Not Cracks Crushed/Cr Cuffs Heat Treat Inspection Ripples in E	Date Step Date Step	Date Step Qty Date Step Qty	Date Step Qty Descri Date Step Qty Descri Date Step Qty Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube	Pr:	Pr:	Part Cate Contamination C	DISPOSITION Rework Scrap Use-as-is Work Order Update Thermoforming Large Fab Date Step Qty Description of work order update or Non-conformance Chief Eng Description of Work Order Update Thermoforming Large Fab FAULT CATEGORY General Bending Gear General Bending Centre Not Concentric to O/S BOM/Route Inspection Incomplete Instructions I	DISPOSITION Rework Skid-tube Crosstube Small Fab Finishing Composite	AGAINST DEPARTMENT Rework Scrap Use-as-is Work Order Update Or Non-conformance Date Step Qty Description of work order update or Non-conformance FAULT CATEGORY General Bending Centre Not Concentric to O/S BOM/Route Broken/Damaged Centre Not Concentric to O/S Cracks Broken/Damaged Instructions Incomplete Part Lost/Mice Crushed/Crimped. Gracks Cracks Broken/Damaged Instructions Incomplete Part Lost/Mice Part Lost/Mice Part Moved Part Moved Part Moved Positioned Mislabeled Positioned Rispection Strip in Tube Countersink Mislabeled Power Loss/Ripples in Bend DISPOSITION AGAINST DEPARTMENT? Skid-tube Machining Small Fab Provide Crosstube Machining Small Fab Provided Processition Provided Part Moved Provided Positioned Mislabeled Power Loss/Ripples in Bend Provided Provided Part Moved Provided Provi	DISPOSITION AGAINST DEPARTMENT/PROCESS

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Folio

Picklist Print

October-07-13 9:02:50 AM

Work Order ID:

107943

Parent Item:

D2174-1

Parent Item Name:

Web

Start Date: 10/18/13

Required Date: 10/18/13

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP C04.06.09ReformatKJ/RF

IPP Rev:D As per Rev E 06-11-22 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.063 2024,T3 .063 sheet		Purchased	No			100	sf	336.0789	0.4722	0.9941052	Ae	13	11.18
				Location		Loc Qty	<u>Lo</u>	c Code					
				MAT022		336.0789							
				1199	16	0.2							
				12119	97	21.34							
				12309	96	11.4							
				1236:	54 .	11.64							
		•		1237	01	16.1039							
				1253	41	87.94							
9				1256	36_	187.455			125	5636 -	->	,00	

NCR:	Yes	1	No
NCR:	yes	1	INO

DQA: _____

Date:

NCR:	/es	/ No				WORK ORDER	NON-CO	ONFOR	MANCE / UP	PDATE			
									•		QA Closed:	Date:	
Work Ord	er:		,			DISPOSITI	ON			AGAINST DE	PARTMENT	/PROCESS	
	•						ework		Skid-tube	Crosstube		Water Jet	Engineering
Part I	۷o.						Scrap		Machining	Small Fab	4	d. Eng. Coor.	Quality
							e-as-is	Ther	moforming	Finishing	Rec/Sto	re/Packaging	Other
NCR I	Vo.					Work Order U	pdate		Large Fab	Composite		Supplier	
Root					Descr	iption of work order	update	Initial	Ad	ction	Sign &		
Cause		Date	Step	Qty		or Non-conformance	2	Chief Eng	Des	cription	Date	Verification	QC Inspector
oc/Data													
quip/Tooling													
perator													
1aterial													
etup	_												
ther	_												
rocess	<u> </u>												
upplier	\vdash												
raining	_												
napproved		L	!	<u> </u>	<u> </u>		FΔ	ULT CATI	GORY		1	<u>l</u>	
Landi	ng (Gear				General		OLI CATI		·			
201101	_	Bending			Г	Bend	ſ	Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route	ŀ	Hardw	are		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged	<u> </u>		tion Incomplete		Part Incorre	 	Weld
	Г	Crushed/0	Crimped.			Burrs			tions Incomplete	/Unclear	Part Lost/M	-	Wrong Stock Pulled
		Cuffs	•			Contamination			enance	-	Part Moved	- L	
		Heat Trea	t			Countersink	Ī	Mislab	eled		Positioned \	Vrong	
		Inspection	n Strip in	Tube		Cut Too Short	Ţ	Misrea	ıd		Power Loss,	_	Other
		Ripples in	Bend			Drill Holes		Offset					
		Torque W	aves in E	xtrusio	n 🗂	Drawing	Ī	Out of	Calibration				
		Turning Se	equence			Finish		Out of	Sequence				
		Wave/Twi	ist in Tub	oe .		Folio		Outsid	e Dimensions				

DART AEROSPACE LTD	Work Order:	107943
Description: Web	Part Number:	D2174-1
Inspection Dwg: D2174 Rev: E		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
6.250	+/-0.010	6,250	_		智丁	JKm-06
6.400	+/-0.010	6.400	-		P T	
4.800	+/-0.010	4.800	_		V	JKm-01
1.375	+/-0.010	1.375	-		٧	
1.050	+/-0.005	1.050			V	
Ø0.128	+0.005/-0.001	128	-		V	
12.650	+/-0.010	12.650	<u></u>		Т	
0.550	+/-0.010	,550	-		V	
0.900	+/-0.010	, 900	_		V	
1.629	+/-0.010	1,629			V	
1.506	+/-0.005	1,506	_		~	
11.550	+/-0.005	11,550			7	
50°	+/-0.5°	50°			Protractor	JKm-04
0.063 thick	+/-0.010	,063	_		V	-
Ø0.172	+0.005/-0.001	.172			V	
			DAS			

Measured by: Ae

Date: 13.11.18

Audited by: 9-89

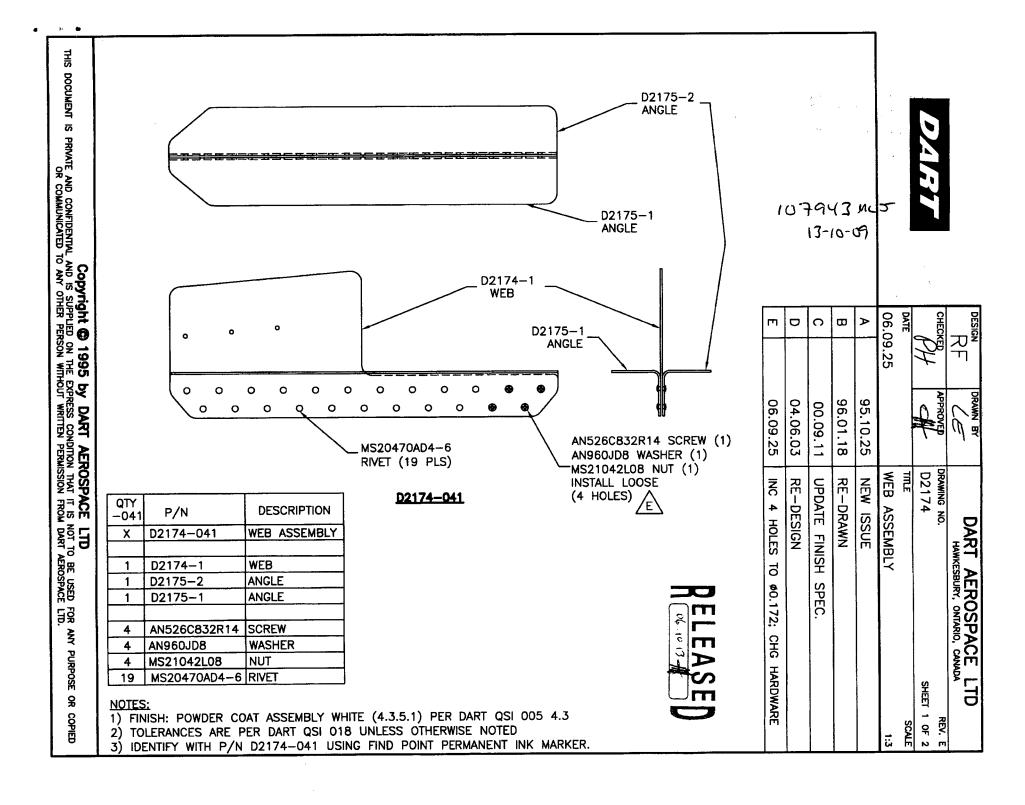
Date: 13.11.18

Date: 13.11.18

Prototype Approval: N/A

Date: N/A

Rev	Date	Change	Revised by	Approved
Α	04.08.12	New Issue	KJ/JLM 1.A	21
В	07.04.02	Ø0.172 dimension added	KJ/JLM A	



06.09.25	STAD	TH	CHECKED,	RF
		*	APPROVED	CE
WEB	37111	D21	DRAWIN	

D2174-1

1.629

#0.172 (4 HOLES)

6.400

- Ø0.128 (22 HOLES)

NOTES:

R0.35 (TYP)

0.500

1.075

0.550

0.900

2.592

4.283

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DOCUMENT_IS

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OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE

FOR-ANY PURPOSE OR-COPIED.

1) MATERIAL: 2024-T3 SHEET (QQ-A-200/4) 0.063 THICK (REF. DART SPEC. M2024T3S.063)

-10.500 (1.050 PITCH)

-11.550 (1.050 PITCH)

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

6.250

3.012 (1.506 PITCH)

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010 5) ALL DIMENSION ARE IN INCHES



4.800

1.375

(TYP)

0.821

- 0.300

DELEASEN			SHEET 2 OF 2		AEROSPACE LTD KESBURY, ONTARIO, CANADA
	1:3	SCALE	2 OF 2	REV. E	

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